From St. Petersburg to Stockholm

Mr. Bryan Tells of the Padded Coachmen of St. Petersburg, Has a Glimpse of Finland and Describes the Charms of the Swedish Capital—Industries, Public Questions and Progressiveness of Sweden.

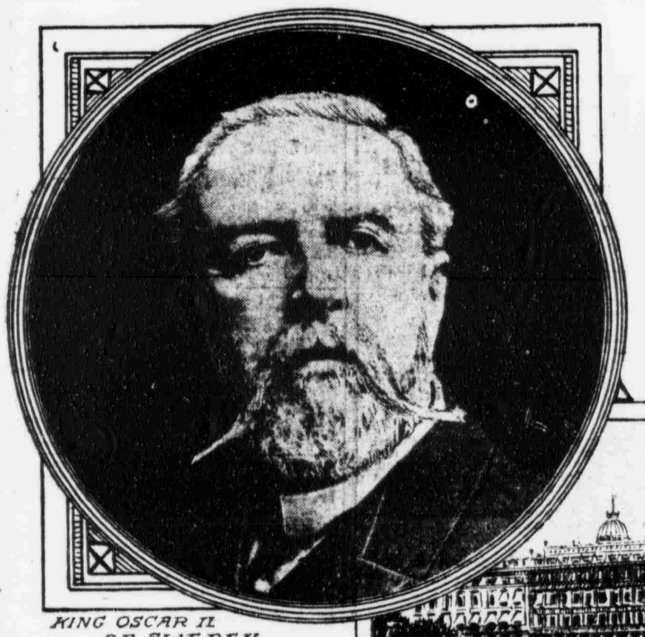
BY WILLIAM JENNINGS BRYAN.

BERGEN, Norway, June 23. The discussion of the Duma occupied so much space that I was compelled to omit from that article all mention of Russia in general and St. Petersburg in particular. I shall therefore begin this article with a brief reference to the Muscovite empire.

Two and a half years ago, when I saw Russia for the first time, I entered by the way of Warsaw and went to St. Petersburg from Moscow. While considerable territory was covered, the winter's snows made the whole country look barren and uninviting.

This time our course lay through the Baltic provinces, and as farming was at its height, the country presented a much fairer picture. The cities and villages through which we passed were busy with life and each had its church, for the Russians are a churchgoing people.

St. Petersburg is a fascinating city. The Church of St. Isaac, with its great granite monoliths on the outside, its pillars within covered with malachite and lapis lazuli, and its immense bronze doors, is among the world's most imposing places of worship. The equestrian statue of Peter the Great is famous and the art gallery is of rare merit. Russia's bronzes are most excellent and her stores exhibit a large assortment of furs.



KING OSCAR II OF SWEDEN.

In St. Petersburg I found myself, as on my former visit, admiring the horses, they being upon the whole the best that I have seen since leaving America. Possibly the fact that so many stallions are driven singly and in pairs may account in part for the handsome and stylish animals seen upon the streets, but certain it is that the Russian horse is a splendid representative of his breed.

There is a large park, called the Point, near the city, and in the evening this park and the approaches to it are thronged with carriages and droskies. As the sun does not set there at this season of the year until between 9 and 10 and is followed by a long twilight, the drives are gay with life until midnight. We did not reach our hotel until 11 o'clock, although we were among the first to leave the park.

BROAD GAUGE RUSSIAN COACHMEN.

Speaking of horses reminds me that the Russian coachman has an individuality all his own. His headgear is peculiar, being a squatty beaver with a spool shaped crown, but one soon forgets the hat in contemplation of the form.

The skirt of the coachman's coat is very full and plaited and the more stylish the equipage the broader is the driver. Beginning at the shoulders his padding gradually increases until about the hips he is as broad as the box upon which he sits.

This padding is carried to such an extreme that the coachman sometimes has to be lifted upon the box and it is needless to say that he is practically helpless as well as useless in case of an accident. It may be that this style of dress is designed for a wind break for those who are seated behind the wearer—this was one of the explanations given—or it may be that like some other fashions in wearing apparel it has no foundation in reason.

I found to my disappointment that Tolstoi is not contributing materially to the political revolution that is taking place in Russia. Being revered throughout the land not only because of his philosophy but also because of his fearless arraignment of the despotism that has afflicted Russia, he might be a powerful factor in giving direction to the popular movement, but believing that individual regeneration furnishes the only complete emancipation from all forms of evil he takes but little interest in what he regards as the smaller and less important remedies proposed by the Duma.

It remains to be seen whether it is wiser to secure that which is now within reach and then press forward for other advantages or to reject piecemeal reforms in the hope of ultimately gaining larger ones. Probably the pioneer in thought and the practical reformer will never be able to agree fully upon this point.

The boat ride from St. Petersburg to Stockholm is one of unsurpassed beauty. It requires about thirty hours to make the trip and of that time but two hours are spent in the open sea, the remainder of the route being between islands that fill the Baltic and the Gulf of Finland as the stars stud the sky.

Just out of St. Petersburg is Russia's most important naval station, where we saw a number of warships, and were informed that the crew of one them had recently refused to comply with a sailing order, answering that it was waiting to see what the Duma would do.

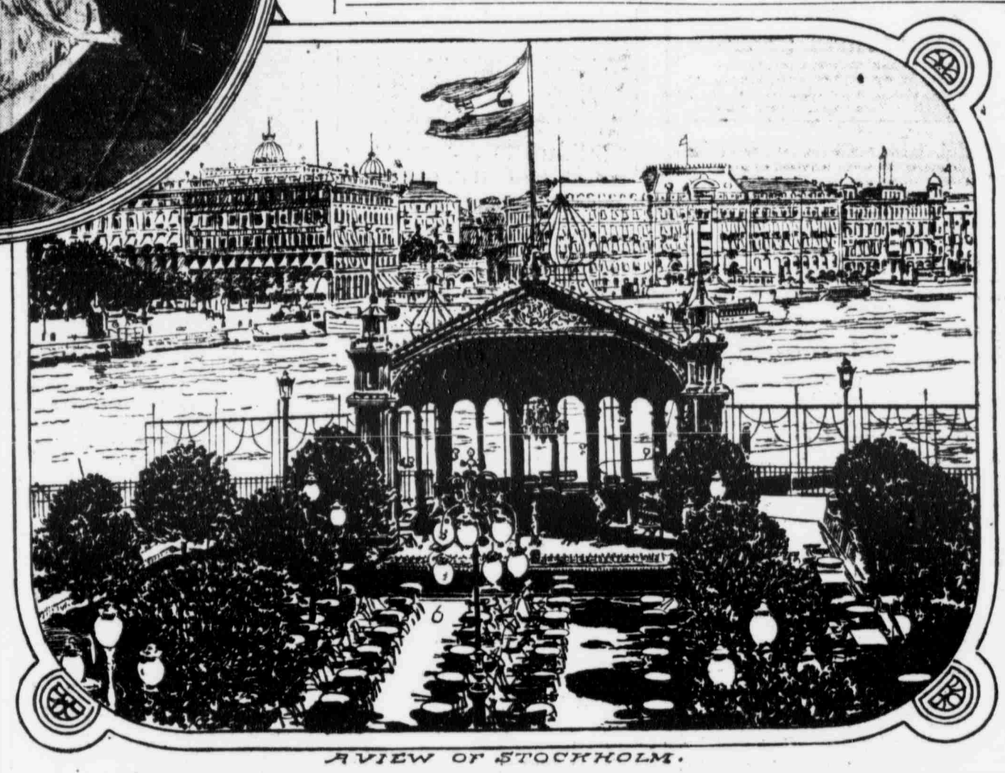
A GLIMPSE OF FINLAND.

Until about a hundred years ago Finland was a part of the Baltic empire, of which Sweden was the head, and of the 3,000,000 inhabitants of Finland something like 20 per cent. are of Swedish descent. As might be expected, the Swedish element is not only the official element, enjoying to a large extent the titles of nobility, but it is still the wealthier and more influential portion.

The Finns proper are not Lapianders, as their northern position would suggest, neither are they in race closely akin to the Slavic or Scandinavian population. As mentioned in the article on Hungary, they came from western Asia and are quite distinct in race characteristics from their present neighbors. They acquired from their Swedish conquerors a fondness for the public school and the percentage of illiteracy is much less in Finland than in other parts of Russia, under whose dominion they unwillingly came in 1809.

Our boat stopped at Helsingfors for a few hours and we had an opportunity to visit the principal points of interest in the capital of Finland. It is a substantial and prosperous looking city, with large schoolhouses, attractive public buildings and commodious churches. We passed several small parks, where children were playing and where numerous comfortable seats beckoned the weary to rest beneath the shade.

I confess to a partiality for the small city park; it is much better to have these breathing spaces so scattered about through densely populated sections that the children as well as adults can find in them a daily refuge, than to have the entire park fund lavished upon suburban parks which can be visited only occasionally.



A VIEW OF STOCKHOLM.

It is a pity that space is not more often reserved for these parks in the laying out of towns, for the ground not only becomes more valuable in proportion as these small parks are the more needed but the opening of them in the heart of a city brings a large unearned increment to those who own land adjacent to them.

FINNISH AUTONOMY.

We could not help noticing the contrast between the market of Helsingfors and those which we visited in Asia. At the former neatly dressed peasants, men and women, exposed for sale from the end of their carts a bountiful supply of vegetables, meats, butter, eggs and cheese.

The eggs were stamped with the name of the owner and the date of laying, the butter was packed in wooden buckets of various sizes and the cheese was of many varieties. Some of the carts were filled with stacks of black bread baked in large flat cakes.

The radishes presented a temptation that I was not able to withstand; the fondness for them, restrained during the months of travel through the Orient, overcame me, and at the risk of being thought extravagant I purchased five dozen at a gross outlay of about five cents and lived high until they were all gone.

The Finns are rejoicing over the autonomy recently secured, and they have signalized their partial independence by creating a single parliamentary body whose representatives are elected by the entire population, male and female, above the age of 24. No one can understand the persistency with which the Finns have struggled for constitutional government without recalling that as a part of Sweden their country long enjoyed the right to representation in the nation's councils.

The people have always resented Russian methods, and only a few years ago the Governor-General sent from St. Petersburg was assassinated by a young Finn who, having thus given expression to his nation's hatred of despotism, immediately took his own life. The death of the Governor was followed by the suspension of such few privileges as the people had been enjoying, but when last year the whole of Russia seemed about to rise in rebellion the Czar announced his willingness to grant all that was asked, and now one can travel through Finland without being harrassed by soldiers or bothered about passports.

STOCKHOLM'S ISLAND SUMMER HOMES.

If Constantinople can claim to be the natural capital of the Eastern Hemisphere among the nations, Stockholm can with equal justice claim to be its natural summer resort. It is situated at a point where a chain of lakes pours its flood into the Baltic, so that the citizens of Sweden's capital have their choice between the fresh water and the salt.

As the lakes and the sea are filled with innumerable islands each family can have one for itself. Summer homes are probably more numerous near Stockholm in proportion to the population than anywhere else, because during the winter months the people live in flats.

One is immediately struck with the compactness of the city and with the absence of single dwellings surrounded by yards. Owing to the severe cold and the long, dark days of winter, the people huddle together in great blocks and thus economize fuel and they are at the same time close to their work.

As soon as spring opens there is a general movement toward the islands, and as we approached Stockholm from the Baltic and left it through the lakes we saw a great many summer cottages and watched the boats carrying their cargoes of passengers to and fro.

NATIONAL INDUSTRIES.

Sweden's lakes are so numerous and so large that about 8 per cent. of her entire area is given up to these internal waterways, and they probably account for the fact that her people had a large domestic commerce before the era of railroads. These lakes are so situated that by connecting them by canals water transit has been secured between Stockholm on the east coast and Gothenburg on the west. The boat trip through these lakes and canals is one of the most pleasant in Europe.

The Swedes who have come to the United States are such excellent farmers that I was surprised to find but 12 per cent. of the area of Sweden devoted to agriculture and 51 per cent. described as woodland. Only 55 per cent. of the population is now engaged in farming, the proportion having fallen from 72 per cent. since 1870, while the proportion engaged in other industries has risen from 15 to 27 per cent.

Lumbering, fishing and shipping each give employment to a large number of men, and iron mining, long a leading industry, is still important, although owing to the development of mines elsewhere Sweden now furnishes but 1 per cent of the entire output of ore, as against 10 per cent. in the eighteenth century.

The fact that she had such an abundant supply of the raw material early gave her a conspicuous place in iron manufactures, and to familiarity with this metal may be due the fact that Sweden was quick to take advantage of the railroad, the telegraph and the telephone. In electrical appliances she now claims second place among the nations. A large use has also been made of the water power with which the country abounds, notably at Norrkoping, where an industrial exposition is now in progress.

THE COUNTRY'S PRODUCTS SHOWN.

We spent a day at this exposition for the purpose of gathering information in regard to industrial Sweden. While the agricultural display was not ready, the exhibit of the products of the factory was exceedingly interesting.

The articles shown included metal work of all kinds and varieties, from heavy machinery to parlor ornaments. In one section canned fruits were displayed, in another great rolls of linoleum and oilcloth, and in still another textile fabrics. The cloth was especially worthy of notice, being of superior quality and of every shade and color.

There was also a complete assortment of dairy implements and farm tools. So skilful is the Swedish artisan that the International Harvester Company has recently established a branch factory at Norrkoping, and with the aid of American foremen is preparing to manufacture reapers and mowers there, not only for Sweden, but for northern Europe.

In addition to the machine made exhibits, there were specimens of the handwork of peasants and students. These included many varieties of needle work, wood carving and decoration on leather and bark.

Peasant girls in native costume presided over these displays and gave the visitor a glimpse of the picturesque garb now fast disappearing before the prosaic dress of the cities. At Skansen, in the suburbs of Stockholm, and at a few of the enterprising stores this quaint costume may still be seen, but it is not generally worn now even in the country.

There is a gallery at the Norrkoping exposition where one may see a collection of Swedish and Danish art, the pictures not only portraying the familiar features and flaxen hair of the north, but recalling the long nights and the winter scenes of that latitude.

THE AVERAGE OF INTELLIGENCE HIGH.

Sweden was a pioneer in the matter of universal education and has at Upsala a State university founded in 1477—fifteen years before Columbus sailed for America. She has also had a college of medicine for more than a hundred years, and her sons have taken high rank in all the departments of science.

Her grammar schools run back to the time of Gustavus Adolphus and her common school system is almost as old. She has given to the world among other things the Sloyd system of teaching, which combines manual training with mental instruction.

Sweden has shown by her prominence in literature, science, art and music that the higher altitudes do not chill the imagination or repress genius, and yet the country is even more noted for the high average of intelligence among the people than for the extraordinary accomplishments of a few.

The Swedish language contains so many words that resemble the English that the Swedish newspaper looks much more familiar than the Greek or the Russian, but it is not always safe to rely upon the similarity in spelling. For instance, "rum" means room, and when it appears in a window or on a door it is only an innocent announcement that travellers can find accommodation within. The word "bad" means bath, and "bad rum" therefore is a familiar sign in hotels.

SWEDEN'S SUFFRAGE QUESTION.

Sweden has her political problems, like all the other nations, and just now her people are absorbed in the question of extending the suffrage.

The upper house is an aristocratic body composed of representatives of the wealthier classes. In electing members of this body a rich man's vote counts for more than a poor man's vote, it being possible for the richest person to have about ten times as many votes as the poorest. As might be expected, the upper house is conservative and stands in the way of some of the reforms proposed by the more popular branch.

The last Ministry was a liberal one, but resigned when the upper house defeated the measure for the extension of the suffrage. The new Ministry has at its head Mr. Lindmann, a business man, who represents the commercial and conservative element, and his party is willing to accept an extension of the franchise provided it is coupled with minority representation, the aim being to increase the conservative strength in the lower house in order to protect the upper house from attack.

The Conservatives fear, and not without reason, that an overwhelming Liberal majority in the popular branch would soon endanger the aristocratic character if not the very existence of the upper house. The situation is interesting in that it indicates the growth of radicalism in the country. The Conservatives recognize this and are prepared to make concessions; they hope to retard the progress of the movement, but realize that they cannot defeat it entirely.

Industrial questions are receiving consideration in Sweden; laws concerning child labor have been enacted, accident insurance has been provided and an old age pension is being discussed. Attention is also being given to the housing problem in the cities, to farm allotments and to the establishment of labor bureaus and boards of arbitration. The Gothenburg license system is in operation in Sweden, under which the sale of liquor, where the sale is not entirely prohibited, is in the hands of semi-official corporations. Whether this system is responsible for it or not may be open to question, but statistics show that there has been a large decrease in the sale of beverages containing a high percentage of alcohol.

KING OSCAR A PROMOTER OF PEACE.

By the courtesy of the American Minister, Col. Graves, I had an opportunity to pay my respects to King Oscar II. I was glad to do so for two reasons; first, because so many of his former subjects have become American citizens; and second, because of the honorable part which he played in the recent crisis which resulted in the separation of Sweden and Norway.

He is of powerful frame, and, though 77 years old, would pass for a much younger man. He has a kindly face and rides about the city without a guard. A more ambitious monarch would have met Norway's demand with armed resistance, but he, recognizing that the holding of Norway against the will of the people would involve his country in perpetual strife, advocated a peaceful separation, provided the people of Norway asked for it in unmistakable terms.

For thirty years he had been the sovereign of both, and in his old age he could not bear to see the two countries engaged in a bloody conflict. He is just now criticised by some who did not become sanguinary until all prospect of war was past, but he has the consolation of knowing that his critics are not only alive but have no dead relatives to mourn. Had he plunged his country into war his critics could remind him of vacant chairs at the fireside.

King Oscar has in a most practical way proved himself to be a promoter of peace and as such deserves the prize provided by that great Swedish chemist, Alfred Nobel. By giving conspicuous approval to his course the trustees of the Nobel fund may be able to encourage other sovereigns to imitate him.

Appreciative Critic.

From the Washington Star.

"I understand your wife lectured you for an hour last night."

"Yes," answered Mr. Meekton. "She told me about a few of my faults."

"Didn't it annoy you?"

"In a way. You see, when a woman of Henrietta's gifts condescends to make a speech it does seem a shame to have such a small audience."

COLORADO TO HONOR PIKE.

SERVICES TO THE NATION OF PIKE'S PEAK'S DISCOVERER.

Achievements to Be Commemorated This Week—Journey Along the Mississippi and Into New Mexico—Pike's Book a Classic of American Exploration.

The people of Colorado will celebrate this week the achievements of Lieut. Zebulon M. Pike, who discovered the Rocky Mountains of that State a hundred years ago this fall.

The celebration will be held at Colorado Springs and a long and varied programme has been prepared, in which the United States and Colorado troops and various Indian tribes will participate. The splendid background of these festivities will be Pike's Peak, which bears the name of its discoverer. Pike first saw these mountains in November, 1806, but the time of the celebration has been fixed a little earlier to avoid the approaching winter.

The work done by this brilliant young soldier is worthy of the highest honor. He was in his twenties, a boy in years, when he made his two great journeys. He was only 34 when he was killed in battle, leading a charge against the British in the War of 1812.

He had risen from the rank of Lieutenant to Brigadier-General, and no soldier in the country seemed to have a brighter future before him when he fell; but had he lived he might never have won prouder laurels than those which securely belong to him.

Pike's great opportunity came to him in 1805. The vast territory included in the Louisiana Purchase had been bought with the people's money, and the whole country was eager to know more about its new domain. Lewis and Clarke were sent by the President to traverse the great un-

ZEBULON M. PIKE.

known in the northwest. Pike was despatched by the General in command of the army, first up the Mississippi to near its sources, and then up the Missouri and to the mountains in the heart of the continent.

His expeditions were purely military in their organization. His companions were detailed from the army, and the strict discipline of their commander was one of the large factors in the great success he won. Here is an illustration of his discipline.

In January, 1807, Pike and his little party were near perishing hundreds of miles from succor among the Rockies. One day he heard a soldier remark, so that all might hear:

"It is more than human nature can bear to march three days without food through snow three feet deep and to carry loads only fit for horses."

Pike waited till camp was pitched and then he called the men together and thanked them for their obedience, perseverance and contempt of every danger.

"But, Brown," he went on, "you have presumed to-day to use seditious and mutinous language. This time I will pardon you, for I attribute your conduct rather to your distress than to an inclination to sow discontent. But I warn you that if you ever repeat such language you will be punished by instant death."

Pike's soldiers knew that he was always ready to do more and suffer more than any man under his command. They fully respected him; he kindled their enthusiasm, and this is among the reasons why one of Pike's biographers was able to write the honest truth that "considering his small force and inadequate means no other man ever contributed to the geographical knowledge of the United States an amount comparable to that which the world owes to the heroic efforts and indomitable perseverance of Pike."

We may sum up very briefly what he did. Our countrymen knew practically nothing of the actual course of the Mississippi north of the site of Des Moines, of the nature and capabilities of the soil, of the Indian tribes scattered along the river or the possibilities of developing that region.

A few trappers and traders lived along the river, but they knew little except their own business and had little to say about that. There were eighteen houses in Prairie du Chien, and it was the only settlement anywhere near the river north of St. Louis. Pike's map, at the site of Dubuque, bears the legend: "Mr. Dubuque's house."

Along the mighty highway, through this wilderness, Pike and his twenty men paddled in their keel boat, seventy feet long, provisioned for only four months though they were to "make a survey of the river to its source!"

At every bend in the river Pike noted its change in direction. He calculated his distances by time and rate of travel; noted on his route map and in his diary the rivers, creeks, highlands, prairies, islands, rapids, shoals, timber, water, soil and Indian villages.

He made a special study of the tribes and the fur question. He brought to the Indians the first news of their Great Father, made treaties with them in the name of the Government and was lost to sight for nine months.

All his work above the Falls of St. Anthony, where Minneapolis stands, was done in the dead of a Minnesota winter, with no food but game, amid incredible hardships and with the larger part of his force left behind in camp disabled. He explored the river to Leech Lake, about thirty miles east of its real source, and the special reports he made on the information he collected were among the most valuable geographical documents of his time.

Pike made a treaty with the Sioux by which the Government came into possession of about 100,000 acres of land along the river from the mouth of the St. Croix to three miles above St. Anthony Falls. He naively reported that the treaty cost him $200 in presents, including whiskey and tobacco and the private bribery of two high priced chiefs.

But it is Pike's second and still greater expedition to the great Rockies of Colorado that will be most in mind at this week's celebration. His party was toiling over the high plateau on November 15, 1806, when he saw what looked like a small blue cloud on his right, and he thought it might be a mountain.

Half an hour later Pike's Peak appeared in full view, with many other summits, and his small party gave three cheers for the "Mexican Mountains." Pike wrote correctly that they are a part of the great mountain system that divides the waters of the Atlantic from those of the Pacific.

Pike named the highest of the mountains Grand Peak, but his countrymen in later years attached his own name to it. From the top of a lower mountain he got his best view of it, and he tells why he did not attempt to climb the higher mountain.

It was at least fifteen miles from him and as high again as the summit on which he stood. In the sorry condition of his men he could not spare a day to reach its base and he did not believe mortal man could reach its top. The upper part of it was bare of vegetation and covered with snow.

Pike's instructions on this journey were to ascend the Missouri and then strike out for the fountainheads of the Arkansas and Red rivers, for no one knew where they came from. He was hunting for the sources of the Arkansas when he discovered the mountains and stood face to face with Pike's Peak.

Then through a terrible winter of want and misery he sought for the Red River and he made a curious but still lucky blunder.

He passed to the west of the Red River sources and missed them entirely. Lost among the mountains and floundering through the snow, he reached a river in February which he thought must be the object of his quest. He was starting down the river when he was suddenly confronted by 100 Mexican troops, who asked him where he was going.

"Down the Red River," said Pike.

"This is not the Red River. This is the upper Rio Grande."

Pike ordered his flag down and folded it. He knew he was in Mexican territory (now New Mexico).

He was suspected of entering foreign territory to spy out the land and he and his party were taken to Chihuahua, where they were held for months. The result was that Pike was able to add to his long descriptions of Colorado geography and the many new Indian tribes he met in this part of our new domain a vivid and lively description of the religions in New Spain, and of the manners, morals and politics of its people, concerning which we were very ignorant.

Pike's large book is one of the classics of American exploration. It was republished in England and appeared in Paris in a French version. In 1895 it was reprinted at home with copious notes in two volumes under the editorship of Dr. Elliott Coues.

TESTS FOR MUSHROOMS.

All the Popular Methods for Telling Poisonous Kinds Found Wanting.

From the Lancet.

The distinctions between edible and poisonous mushrooms are usually based on empirical grounds, with the result that mistakes of a serious nature may, and often do, occur. The subject has recently received the attention of Prof. Labesse, who has described the characters whereby edible and poisonous mushrooms are distinguished in various localities. Many popular tests for determining the wholesomeness or otherwise of a mushroom are based on color, odor, taste and texture; on the presence of rose colored lamellæ or a milky juice; on the situation in which the fungi grow, and on the action of the mushrooms on various substances, including gold and silver coins, milk and onions.

Thus, according to one popular notion, mushrooms having a blue, violet, green or red color are unfit for food, but this test would exclude many wholesome fungi, including the green Russula and the green Clytocybe. It has been said that only mushrooms which do not change color when cut are good to eat, but Lactarius deliciosus, some species of Boletus, and many other mushrooms which change color are perfectly harmless, while, on the other hand, Amanita muscaria and some other fungi which do not change color when cut should be avoided.

Prof. Labesse points out that the presence of an agreeable odor is not an infallible test of a good mushroom, as a species of Amanita (l'Amanite phalloide) is especially dangerous in spite of its pleasant odor. There is a dictum among certain amateur gatherers that a good mushroom has a grateful taste. This test is useful in many cases, but not in all—e. g., l'Amanite phalloide and la fausse Oronge (Amanita muscaria) are scarcely bitter, but quite unfit for eating.

As regards texture it is generally regarded that compact, brittle mushrooms, with a dry skin, are edible, but Prof. Labesse considers this to be a mere prejudice, as the eating of certain species of Russula would seriously indispose any one placing confidence in these characters. Mushrooms with rose colored lamellæ are usually considered to be edible, but this is a false notion, some species of Volvaria and other poisonous fungi possessing this character. Mushrooms with a milky juice are regarded as dangerous by some collectors, but this rule must not be followed too literally as many excellent members of the genus Lactarius would thereby be excluded.

The situation in which mushrooms grow is a very uncertain criterion of edibility. Thus, it would be dangerous to regard all mushrooms growing in meadows, open fields and roadsides as good, since many suspected kinds grow in such places. On the other hand, mushrooms growing in coniferous woods and under trees generally have been condemned, but the succulent Lactarius deliciosus grows in coniferous woods and the edible Pholiota grows under poplars, while species of Helvella and Hydnum, which flourish in shady woods, form a wholesome dish.

The blackening of a gold or silver coin or ring does not prove a mushroom to be poisonous; the blackening is generally due to more or less decay in the mushroom, as fresh mushrooms, whether poisonous or not, fail to blacken these metals. The curdling of milk by mushrooms is another property which has nothing in common with toxicity, the cause of the curdling being attributable to the presence of an acid or a ferment. An old custom consisted in dipping a white onion or a clove of garlic into the cooking vessel containing the mushrooms and noting whether the latter turned brown or not. The presumption that only noxious mushrooms are turned brown by this treatment is not justifiable, since some non-poisonous varieties do change color in this way while some poisonous varieties do not. It is a common belief that slugs and insects attack edible mushrooms, but this is by no means universally true, as the deadly Amanitas are attacked by slugs, while many wholesome fungi are respected by these depredators.

The tests so far described are largely of a rule-of-thumb nature, but another test which has received wide acceptance depends upon the fact that many poisonous fungi are surrounded by a velum universale, notable examples being the intensely poisonous subgenera Volvaria and Amanita and the puffballs. But, like all other rules, this is open to exceptions, including the genus agaricus, to which the common mushroom, A. campestris, belongs. Prof. Labesse considers that there are no practical empirical means by which amateurs may with confidence decide whether an unknown fungus is good to eat.

There is often a risk taken in eating mushrooms, and those who do not wish to incur the risk are reminded by Prof. Labesse of the method adopted by Gérard in 1850. He boiled the mushrooms for some time in salt water, threw away the water, and exposed the mushrooms to the air. He fed his family for nearly a month upon all kinds of poisonous mushrooms treated in this way and found them to be nutritious, though less palatable than mushrooms cooked in the ordinary way. Prof. Labesse suggests that not more than one mushroom in ten is poisonous, and that the best test consists in rejecting those which have a ring at the base of the stipe. Deadly mushrooms as a rule possess a ring or annulus consisting of the remains of the Velum partiale which covers the young mushroom and is fractured during growth. In order to apply this test the mushrooms must be gathered with care.

Unfortunately, in rejecting mushrooms possessing this character some excellent varieties are rejected in addition to the commonest poisonous varieties. Amateurs should know the characters of the mushrooms which grow in their neighborhood, restrict themselves to certain kinds which they know to be edible, and in cases of doubt should abstain altogether.

UNCLE SAM'S SCHOOL FOR HENS

QUEST FOR A BREED THAT WILL LAY BUT WON'T SET.

Perhaps An Appeal to the Hen's Vanity Will Induce Her to Let the Incubator Do the Work That Now Interferes With Egg Production—It's on Trial.

WASHINGTON, Sept. 22.—The United States Government has turned its attention to the long neglected duty of educating the American hen. As an abstract proposition the American hen is admitted to have admirable qualities, but examination of her characteristics at close range shows certain shortcomings which can be obliterated only by a thorough course under a careful tutor.

It is for this reason that the United States Government has just opened a school for hens at St. Denis. The particular line of study to which the institution is to devote its energies is in association with the laying of eggs. Prof. Robert H. Slocum, a doctor of eggology of exceeding great fame, is president of the institution. He is now installed at St. Denis with a select faculty and a large number of pupils.

The necessity for a school for the education of the hen in the art of laying eggs arises from the failure of the bird to keep abreast of this progressive age. Slow to abandon the traditions of her race, the hen has ignored the presence of the incubator among civilized peoples and continued to persist in both laying and hatching eggs.

The mission of Prof. Slocum and his able faculty is to persuade the hen that man is perfectly capable of attending to the hatching end of the business if she will devote her time and energies to the production of the eggs. For the time being, at least, man is forced to admit that the hen has a monopoly of egg making.

It has been shown by various experiments that the hen can, under encouraging conditions, lay a great many more eggs than she does under normal circumstances. The great stumbling block has always been the instinctive propensity to hatch out a brood of little chicks which every now and then asserts itself in the hen breast.

This results in loss of time and a falling off in the egg supply, with a consequent bull movement in the market that affects custard pie prices and the current quotations for omelets. A sound and stable basis with a minimum of fluctuation is the desideratum from a commercial standpoint and Prof. Slocum's task is to make this possible.

Individual efforts to wean the hen from her desire to sit have been frequent and of a wonderfully varied character. Every farmer's boy knows the trick of tying a piece of red flannel to the hen's right hind leg to break her of her desire to sit.

The presence of the bit of gaudy cloth has the effect of distracting the hen's attention from every other ambition than that of getting rid of the unusual adornment, and she will spend days in whirling about in circles in her endeavors to pick out the knots in the flannel. Another method is to place the hen in an apartment in which there are not the necessary facilities for indulging her inclinations.

Still another is to remove all eggs upon which the designing hen might elect to sit. All these plans and others have proved successful in but a limited degree, and as the outcome of all research and study the conclusion has been reached that the desired end is to be obtained only through an appeal to the bird's reason, and perhaps to her vanity.

The fundamental principles upon which Prof. Slocum's work is proceeding includes the universally recognized fact that there is deep down in the heart of every creature a desire to excel. He holds, therefore, that if he can train one hen to lay incessantly and without interruption for sitting purposes other hens thrown in daily contact with this pacemaker will be stirred to equal if not to exceed her accomplishments.

Thus in time the entire community of hens will be engaged in a laudable egg laying contest to which they will so assiduously devote themselves that they will abandon all thought of sitting and hatching. Heredity is looked to to care for the rest.

The eggs produced by these egg laying rivals after being hatched in incubators are expected to present a generation of pullets inspired only with an ambition to lay. Thus in time a race of hens will have been secured that will know no more about the cares of brood raising than they do of Sanskrit, and care as little.

This experimental college, for it has just been opened and must be regarded as experimental until later advices give some assurance of its success, is under the direct charge of the animal husbandry office of the bureau of animal industry of the Department of Agriculture. The course of instruction begins in the case of each chicken with an appeal to the appetite. It is an accepted fact that certain foods fed under certain conditions act as incentive to the laying hen to pursue her vocation with zest.

The class that has just matriculated consists of white Plymouth Rocks and it is said by Prof. Slocum to be a bright and promising collection. The first work attempted with these freshmen was with the moist and dry mash systems of feeding and the self-feeding hoppers.

The class of seventy-five hens was equally distributed in three sets, each with a suitable house and yard. The conditions obtaining in each colony are the same as in the others with the exception of the feeding arrangement.

The hens in colony No. 1 are receiving morning and night a mixture of whole or cracked grain scattered on the ground and at noon a moistened mash. The same menu is served to colony No. 2, except that the noon mash is dry.

Colony No. 3 has more ample opportunity to indulge its appetite. Its food is not scattered abroad, but is supplied to the hens in self-feeding hoppers, one of which is open day and night, and there is no restriction as to the time of eating or the quantity of food eaten. All mash served to this colony is dry.

While there will always be ample nest facilities for the hens as long as they show a disposition to lay, a gentle but firm hand will be laid upon them when they indicate a weakness for the ancient and honorable but now wholly unnecessary art of sitting. Every influence will be brought to bear to turn them from any such inclination, and it is said by the members of the faculty that when a hopeless case is found she will be immediately pitched over the barnyard fence that she may not prove a bad example for the others.

The several feeding conditions are expected to prove which is most advantageous to the proper cultivation of the eternal laying spirit, and when this has been determined it is believed the work of rearing a race of constant layers will proceed with renewed vigor and amplified results.

That no advantage may be lost the college is provided with a large supply of incubators, in which will be hatched the eggs laid by the non-setting species, and particular pains will be taken by the professors with the chicks which come from these. In three or four generations it is expected that the descendants of the first class will be wholly weaned from all sitting notions, and these three or four generations should be the product of a couple of years time.

Then the country will be in the enjoyment of a species of hen that will defy the efforts of scheming manipulators to corner the egg market at Eastertide or to run up the price of eggbread in November. Uncle Sam expects every hen to do her duty.